

## ABSTRACT

Provided are methods for determining the predisposition of a subject to a mood disorder by determining in a biological sample of a subject, the presence of a kainate receptor subunit GluR7 allelic genotype or allelic phenotype associated with predisposition to a mood disorder. The allelic genotype is homozygosity for a thymine containing nucleotide at position 928 (928T/T) or homozygosity for a guanine containing nucleotide position 928 (928G/G). In addition, a predominant expression of one GluR7 allele over the other allele in a heterozygous individuals also predicts predisposition to a mood disorder. The present invention also includes a method of treating or preventing a mood disorder and methods for identifying a compound useful for treatment. Transgenic non-human animals that express only a particular human GluR7 allele at nucleotide position 928 also are provided as a model of a human mood disorder.